

Serial No.: 10/601,311  
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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Previously Presented) A composition comprising a protein in crystalline form wherein the protein consists of SEQ ID NO:4, and wherein the protein crystal has a crystal lattice in a P2<sub>1</sub>2<sub>1</sub>2<sub>1</sub> space group and unit cell dimensions, +/- 5%, of a=48.36Å b=72.29Å and c=94.52Å,  $\alpha=\beta=\gamma=90^\circ$ .
- 2-3 (Cancelled)
4. (Previously presented) A composition according to claim 1 wherein the protein crystal diffracts X-rays for a determination of structure coordinates to a resolution having a value that is less than or equal to 3.0 Angstroms.
- 5-8 (Cancelled)
9. (Previously Presented) A method for forming a crystal of a protein comprising:
  - forming a crystallization volume comprising a precipitant solution and a protein that consists of SEQ ID NO:4, and wherein a protein crystal is formed that has a crystal lattice in a P2<sub>1</sub>2<sub>1</sub>2<sub>1</sub> space group and unit cell dimensions, +/- 5%, of a=48.36Å b=72.29Å and c=94.52Å,  $\alpha=\beta=\gamma=90^\circ$ ; and
  - storing the crystallization volume under conditions suitable for formation of a protein crystal.
- 10-11. (Cancelled)
12. (Previously presented) A method according to claim 9 wherein a protein crystal is formed that diffracts X-rays for a determination of structure coordinates to a resolution having a value that is less than or equal to 3.0 Angstroms.
- 13-28. (Cancelled)
29. (Previously Presented) A non-crystalline protein consisting of SEQ ID NO:4.
30. (Cancelled)
31. (Previously Presented) A non-crystalline protein consisting of residues 136-461 of SEQ ID NO:1.
32. (Previously Presented) An isolated non-crystalline protein consisting of residues 136-461 of SEQ ID NO:1.
33. (Previously Presented) An isolated non-crystalline protein consisting of SEQ ID NO:4.

Serial No.: 10/601,311  
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## 34-36. (Canceled)

37. (New) A method for obtaining a three dimensional structure of a protein comprising the steps of:

(a) obtaining a crystal of a protein whose sequence consists of SEQ ID NO:4, wherein the protein crystal has a crystal lattice in a  $P2_12_12_1$  space group and unit cell dimensions, +/- 5%, of  $a=48.36\text{\AA}$   $b=72.29\text{\AA}$  and  $c=94.52\text{\AA}$ ,  $\alpha=\beta=\gamma=90^\circ$ ;

(b) using the crystal obtained in step (a) to obtain an x-ray diffraction pattern; and

(c) solving the three dimensional structure of the protein from the diffraction pattern obtained in step (b), thereby obtaining the three dimensional structure of the protein.

38. (New) A method for identifying a compound that binds to a protein comprising the steps of:

(a) obtaining a crystal of a protein whose sequence consists of SEQ ID NO:4, wherein the protein crystal has a crystal lattice in a  $P2_12_12_1$  space group and unit cell dimensions, +/- 5%, of  $a=48.36\text{\AA}$   $b=72.29\text{\AA}$  and  $c=94.52\text{\AA}$ ,  $\alpha=\beta=\gamma=90^\circ$ ;

(b) using the crystal obtained in step (a) to obtain an x-ray diffraction pattern;

(c) solving the three dimensional structure of the protein from the diffraction pattern obtained in step (b), thereby obtaining the three dimensional structure of the protein; and

(d) identifying one or more compounds that binds to the protein based on the three dimensional structure.

39. (New) The method according to claim 38, further comprising the step of:

contacting one or more compounds identified in step (d) with the protein whose sequence consists of SEQ ID NO:4.

40. (New) The method according to claim 39 further comprising the step of:

measuring an activity of the protein whose sequence consists of SEQ ID NO:4, when the protein is contacted with the one or more compounds.

41. (New) The method according to claim 40, further comprising the step of:

comparing activities of the protein whose sequence consists of SEQ ID NO:4, when the protein is in the presence of and in the absence of the one or more compounds.

42. (New) The method according to claim 38, further comprising the steps of:

contacting one or more compounds identified in step (d) with a cell that expresses a protein whose sequence consists of SEQ ID NO:4; and

SEP-05-2007 19:14

MORGAN, LEWIS & BOCKIUS

214 466 4001 P.05

Serial No.: 10/601,311  
Filing Date: June 20, 2003

detecting whether a phenotype of the cell changes when the one or more compounds are present.